



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,340	01/26/2001	Alastair M. Reed	EWG-136 US	6795
23735	7590	01/11/2005	EXAMINER	
DIGIMARC CORPORATION 9405 SW GEMINI DRIVE BEAVERTON, OR 97008			DASTOURI, MEHRDAD	
			ART UNIT	PAPER NUMBER
			2623	
DATE MAILED: 01/11/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/771,340	REED ET AL.	
	Examiner	Art Unit	
	Mehrdad Dastouri	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 June 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9 and 11-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-9 and 11-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date June 25, 2004.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicants' amendment filed June 21, 2004, has been entered and made of record.

Response to Arguments

2. Applicant's arguments filed June 21, 2004, have been fully considered but they are not persuasive.

Regarding Claims 1-3, 14, 17-19 and 20, Applicants should submit a clear argument pointing out the basis for the disagreements why Background of the invention and Kawasaki (prior art of record) is not understood to teach or suggest the referred combination of limitations recited in the claims. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-3, 11-14, 16, 20 and 21 are rejected under 35 U.S.C. 102(a) as being anticipated by background of the instant application.

Regarding Claim 1, background of the instant application discloses, as a known technique, a method of filtering data (Page 2, Lines 1-5) prior to reading a digital

watermark that was inserted using a scale to black technique (Page 1, Lines 18-21) comprising:

projecting color values of each pixel onto a preferred projection axis that is determined by examining color of pixels surrounding each pixel, and reading the watermark from resulting data (Page 1, Lines 16-27. The number of pixels in digital watermark is not identified, and the watermark can be reasonably assumed to be associated with only one pixel.).

Regarding Claim 2, background of the instant application discloses a system for reading a digital watermark from a digital image which includes a number of pixels, each pixel being defined by a set of numbers representing the color components of the particular pixel (inherent characteristic of a digital image), said system comprising:

a filter for calculating a value of each pixel along a preferred projection axis (Page 2, Lines 1-5), the preferred projection axis corresponding to a direction of embedding determined based on color characteristics of at least some pixels associated with each pixel (Page 1, Lines 23-27), and

a watermark reader which operates on the values calculated by the filter (Page 1, lines 16-27).

Regarding Claim 3, background of the instant application discloses a method of calculating values that will be used to read a watermark from a digital image, wherein the digital image comprises a plurality of pixels (inherent characteristic of a digital image), said method comprising:

projecting color values of each particular pixel to a preferred projection axis, said preferred projection axis being determined by averaging at least some color values of the pixels in an area adjacent to a particular pixel (Page 1, Lines 12-27, page 2, Lines 1-7); and

providing results of said projecting (Page 1, lines 16-27).

With regards to Claims 11-14, 16 and 21, arguments analogous to those presented for Claims 1-3 are applicable to Claims 11-14, 16 and 21.

With regards to Claim 20, arguments analogous to those presented for Claims 1-3 are applicable to Claim 20. Fundamentally, extracting watermarks will be performed around the color axis used to embed the watermark that definitely approximates this axis.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawakami et al (U.S. 5,652,626).

Regarding Claim 17, Kawakami et al disclose a method of inserting first and second watermark in an image comprising:

Inserting said first watermark in said image in a first color direction and inserting said second watermark in a color direction orthogonal to the color direction of said first watermark (Column 17, Lines 30-67, Column 18, Lines 1-66. Formulas 37-39 illustrate

different watermarks are embedded in first, second and three color directions (R,G and B in RGB color space. These directions are inherently orthogonal.).

Regarding Claim 19, Kawakami et al further disclose the method recited in Claim 17 wherein the intensity of said second watermark is lower than the intensity of the first watermark (Formulas 37-39, different watermarks have different intensities.).

7. Claims 1-9 and 11-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Braudaway et al (U.S. 5,825,892).

As an alternative rejection, Braudaway et al. disclose Claims 1-9 and 11-21 limitations (Column 4, Lines 28-43; Figures 7 and 8; Column 17, Lines 5-67, Column 18, Lines 1-21).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4-9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over background of the instant application.

With regards to Claims 4 and 5, it is a conventional procedure to examine a particular tile size of at least a 3 x 3 kernel (an area of three by three pixels that includes the pixel of interest as a center pixel) for obtaining the intended image pre-processing, processing and post-processing objectives because it is a well known procedure

routinely implemented in the art to obtain adequate information regarding pixel intensity variations in the processed digital image.

With regards to Claims 6-9 and 15, arguments analogous to those presented for Claims 4 and 5 are applicable to Claims 6-9 and 15.

10. Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al (U.S. 5,652,626) and background of the instant application.

Regarding Claim 18, arguments analogous to those presented for Claims 3 and 17 are applicable to Claim 18. Kawakami et al further disclose the method of extracting two orthogonally inserted watermarks (Column 23, Lines 55-67, Column 24, Lines 1-40).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of the background of the instant application suggesting embedding watermark in different color axes according to the teachings of Kawakami et al to implement limitations recited in Claim 18 because it will expand the versatility of the watermarking system and will provide more robust embedded information.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

1. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2623

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEHRDAD DASTOURI
PRIMARY EXAMINER

Mehrdad Dastouri

Mehrdad Dastouri
Primary Examiner
Art Unit 2623
January 8, 2005